

Pownal Tannery Superfund Site

Pownal, Vermont

Background

The 28-acre Pownal Tannery Superfund Site (site) is the location of a hide tannery and finishing facility that Pownal Tanning Company, Inc. operated from 1935 to 1988. The site comprises three main areas: the tannery building complex that housed the various plant operations; a 22-acre lagoon area that processed the tannery's wastewater from 1962 to 1988;

and a landfill, partially constructed in 1982 to receive sludge dredged from a portion of the lagoons. The section of the Hoosic River adjacent to the building complex was dammed and a hydroelectric generating station was installed to provide power for the tannery.

In 1985, the Vermont Agency of Natural Resources notified the company that they were in violation of state environmental requirements, which resulted in the partial closure of the landfill. The Vermont Department of Environmental Conservation (VT DEC) issued an Administrative Order in April 1988 requiring additional actions, but by the end of the year, the company declared Chapter 11 bankruptcy and ceased operations.

EPA took a number of cleanup actions in 1993-1994 and again in 1999-2001 to address site contamination involving the building complex and landfill. These actions included the removal of over 13,000 pounds of contaminated materials from the tannery buildings, decontamination of the warehouse, demolition of remaining buildings, removal of underground storage tanks and contents, and capping of the landfill on Dean Road.

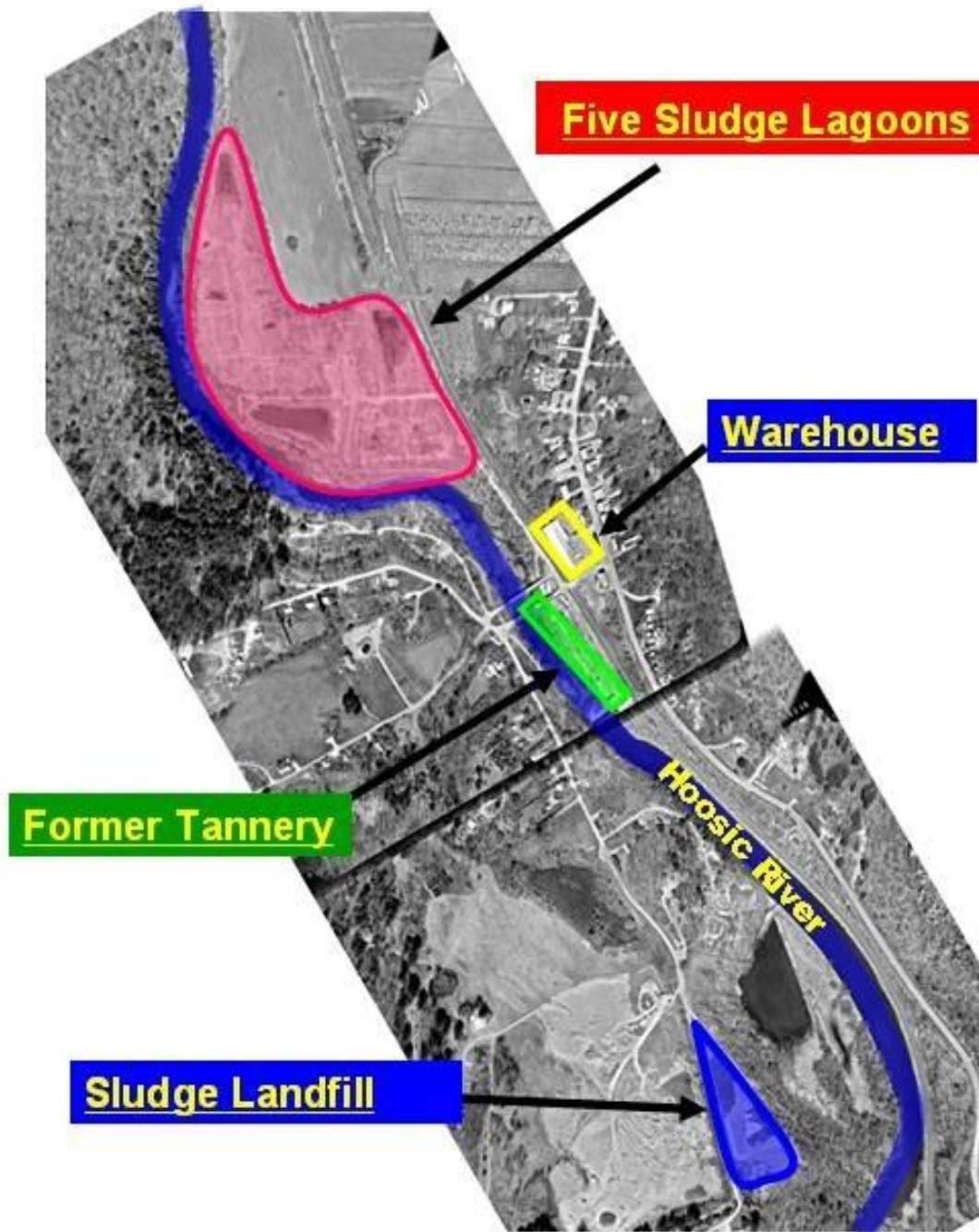
The site was placed on the Superfund National Priority List (NPL) in January 1999. EPA subsequently conducted a Remedial Investigation/Feasibility Study (RI/FS) to determine if additional cleanup was necessary for the lagoon area, surface water/sediment of the Hoosic River and groundwater. In September 2002, EPA selected a final remedy for the site that entailed the excavation and consolidation of lagoon wastes; construction of a low-permeability cap over the consolidated wastes; long-term monitoring of river sediments and groundwater; and institutional



Quick Facts

Location:	Off of VT Route 346 (Tannery Building Complex)
Acreage:	28 acres
Parcels:	Four
Current Uses:	Public recreation, vacant industrial space, municipal waste water treatment facility (under construction)
Ownership:	Public (except former landfill)
Cleanup Status:	Cleanup construction activities complete. Site is in operations & maintenance and long-term monitoring.
Surrounding Land Uses:	Primarily rural and residential

Site Map



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controls to protect the cap and restrict groundwater use. Remedial construction activities involving the lagoon area were completed in September 2004.

Reuse Status

EPA and the VT AEC have been working closely with the town of Pownal to consider future site reuse in the design and implementation of the cleanup. This coordination is helping to facilitate potential reuse and will help ensure that the cleanup is fully protective of current and reasonably-anticipated future land uses. To assist the Town in evaluating reuse options for the site, EPA provided it with a \$97,250 grant in September 1999 to conduct a community-based reuse planning process. The Town summarized the results of that process in a February 2001 report entitled, “Pownal Tannery Superfund Reuse Assessment Report” (Reuse Plan). Since that time, significant progress has been made towards the goal of returning the site to productive use. As an important step in achieving those goals, the Town acquired the former tannery building complex and lagoon area in 2002.

The Former Lagoon Area

For the former lagoon area, the reuse plan recommended both active recreational uses (e.g., playing fields, seasonal skating rink) and passive recreational uses (e.g., trails, canoe/kayak launch, picnic/lawn area). In addition, lagoon #2 was identified as the preferred location of the town’s new waste water treatment plant (WWTP).



Post-remediation view of lagoon area

Since lagoon #2 was also determined to be a good location for a staging area to process soils/sludge from the former lagoons, EPA and the Town’s engineers collaborated to make the area suitable for the WWTP once the staging area was no longer needed, and to ensure that construction activities could be done as efficiently and cost-effectively as possible. This included:

- Adjusting the lagoon-area landfill footprint to allow for the optimum WWTP configuration
- Carefully coordinating site preparation activities (e.g., the Town cleared trees and brush and installed wick drains to lower water levels prior to EPA backfilling the lagoon)

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- Backfilling lagoon #2 in a manner that provided the proper soil foundation for both the WWTP and the staging area for EPA's response actions (e.g., soil type, placement and final grading conformed to the necessary construction standards)
- Grading the general area to accommodate the planned future uses and provide proper management of surface runoff
- Widening the access road to facilitate heavy equipment needed for both the cleanup and WWTP construction activities

The cleanup activities involving the former lagoon area were completed in less than a year, thereby avoiding potentially costly delays to the WWTP project and bringing about earlier water quality improvements in the Hoosic River. The construction of the new municipal wastewater treatment plant is currently underway and is expected to be online in 2006. Funds towards the construction of the WWTP have been provided by EPA (\$7.4 million), United States Department of Agriculture (\$5.1 million), and VT DEC (\$5.3 million).

The most important reuse consideration for the lagoon-area landfill was the need to provide a surface slope that would allow it to be used as a playing field (i.e., generally a slope of 2% or less). However, the State of Vermont landfill requirements dictate a slope of at least 5% to promote surface drainage. To meet the necessary drainage requirements, EPA designed a cap that consists of a low-permeability layer with a 5% slope overlain by a permeable top layer with a 2% slope. Precipitation reaching the surface will rapidly percolate through the top layer and flow off the low-permeability sublayer. EPA worked with the VT DEC to get the necessary state waiver for this alternative design. Also, to increase the stability of the landfill, EPA incorporated a 10% mix of concrete into the sludge from lagoons #1 and #5 prior to consolidating it into the landfill.

Another design feature for the landfill was the use of perimeter boulders - instead of less aesthetically pleasing barriers such as chain-link fencing - to prevent all terrain vehicles (ATVs) and other unauthorized vehicles from damaging the protective cap.

Tannery Complex

The Tannery Complex consists of a three-acre parcel where the administration building and tanning operations were located. The former hydroelectric works and dam built in 1955 still exists. For this parcel, the reuse plan envisions passive recreational use (e.g., canoe/kayak launch, playground, picnic area) and an outdoor performance stage.



Tannery Complex before cleanup

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Superfund cleanup of the tannery complex has been completed. All above-ground structures have been demolished, soil contamination was removed to residential standards, and the area has been re-graded and seeded. Protective handrails along the riverbank were also installed.

The building's concrete foundation walls that remain underground were left to provide additional support for the sloped river banks. Local citizens are attempting to raise funds for picnic tables, landscaping and other improvements. A plaque memorializing the historic nature of the former mill has been erected.

During the demolition of the former tannery buildings, EPA salvaged the large, old forest timbers and, after shaving off the outer layers, donated them to the town to be used in building a trash transfer station.

Tannery Landfill

EPA constructed a low-permeability cap on the former Dean Road landfill in 2001. The property is currently under private ownership and the town of Pownal has no plans to acquire it. The reuse plan did not address the reuse of the tannery landfill. Operation and maintenance of the landfill is currently being undertaken by the VT DEC.

Site Description

The tannery complex and former lagoon area are located along the east side of the Hoosic River, and the landfill is approximately 2,000 feet southwest of the former tannery building on the west side. The surrounding area is predominantly rural and residential, with the closest residences being approximately 200 feet from the former lagoon area. Nearby residences rely on ground water from private wells for their water supply.

The Hoosic River is considered a Class B river as defined by the Vermont Water Resources Board. Class B waters have an objective of providing water quality that consistently exhibits good aesthetic value and to provide high quality habitat for aquatic biota, fish and wildlife. Uses include public water supply (with filtration and disinfection), irrigation and other agricultural uses, swimming, and recreation.

As described previously, the former lagoon area has been partially capped and contoured to allow for the construction of future recreational fields. Although the upper surface is elevated above the 100-year flood plain, the area along the river to the west and southwest is subject to flooding. EPA lowered the northern berm of the lagoon and placed riprap to facilitate drainage during future flooding events. Access to the former lagoon area is by way of an unpaved road that connects with Dean Road.

Groundwater supply wells are prohibited in this area, so water to support future uses would need to be brought in from an outside source. Although the former lagoon area is currently zoned "rural/residential," the institutional controls required by the Superfund cleanup will prohibit future residential use of this area through soil and groundwater easements granted to the VT DEC and other deed restrictions to protect the cap and berm.

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The topography within the former tannery building complex consists of two tiers, each running lengthwise and parallel to the Hoosic River. A sloped bank separates the two tiers. Access is by way of Dean Road, which intersects with State Route 346 about 250 feet to the east and terminates at an abandoned bridge. A temporary bridge has been constructed immediately down river. The dam and hydroelectric generating station are located on the southern end of the property and are not currently operational.

Environmental Summary

For many years operations at Pownal Tannery severely affected the Hoosic River. Untreated wastewater containing dyes, solvents, waxes, and other harmful chemicals discharged directly into the river until 1962. Various attempts at wastewater treatment were employed by the tannery from 1962 through 1988, including the construction and operation of the five lagoons. In 1982, a state permitted lined landfill was constructed and received excavated sludge from one of the five lagoons (lagoon #2). The remaining four lagoons accepted tannery sludge until 1988 when the tannery ceased operation.

Today, cleanup-related construction activities have been completed at the former lagoon area, tannery landfill and the tannery building complex. The remedies implemented at the site will address all current and future risks posed by the remaining contamination.

Operation and maintenance activities involving the former lagoon-area landfill, the Dean Road tannery landfill, and the former tannery building area are currently being conducted by the VT DEC. Long-term monitoring of the groundwater in the vicinity of the former lagoons and the river sediment is also being done. Institutional controls will be established for the landfills that will protect the integrity of the caps (such as restrictions on soil excavation) and restrict the use and alteration of the local

<u>Key Events</u>	
<i>1935 – 1988</i>	Pownal Tanning Company, Inc. in operation
<i>1985</i>	VT ANR issues a notice of violation resulting in partial closure of landfill
<i>1988</i>	VT AEC issues Administrative Order. Company declares bankruptcy.
<i>1993 – 1994</i>	EPA removes contaminated materials from tannery buildings
<i>1999</i>	Site added to National Priority List
<i>September 1999</i>	EPA provides the Town of Pownal with a \$97,250 reuse planning grant
<i>1999 – 2001</i>	EPA decontaminates the warehouse building, demolishes other tannery buildings, removes underground storage tanks, consolidates contaminated soils into the landfill from under the tannery complex, and caps the Dean Road landfill
<i>February 2001</i>	Town of Pownal completes Reuse Plan
<i>September 2002</i>	EPA signs Record of Decision and selects the final site remediation plan
<i>2002</i>	Town of Pownal acquires lagoon and tannery complex properties
<i>September 2004</i>	Remedial construction activities involving the lagoon area are completed

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groundwater. EPA will also conduct a formal review of the site every five years, as required by the Superfund statute, to evaluate the performance and effectiveness of the cleanup actions taken.

For Additional Information

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